CLEVATARI NEWSLETTER

ISSUE #77 DECEMBER 1987

THE CLEVATARI NEWSLETTER

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HAPPY HOLIDAYS!!

THE CLEVATARI NEWSLETTER IS THE JOURNAL OF THE CLEVELAND ATARI COMPUTER ENTHUSIASTS 'CACE' AN INDEPENDENT USERS GROUP

EDITORIAL

LOCAL or MAIL ORDER

Several months ago this newsletter printed a list of local stores where Atari equipment and/or software could be purchased. Not long after this list was published several individuals with whom I spoke expressed a desire to buy their computer needs from local establishments but confessed that most of their needs were met by mail order houses, because as they stated, "It's so much cheaper to buy from a mail order house."

I can't argue that point if your only criteria is price, but what happens when your purchase doesn't work the way it's supposed to or the way you would like it to. It's to this topic that I would like to speak. With your permission I would like to tell you a true story. I know for a fact that it's true because IT HAPPENED TO ME!!

As all of you know by now I have, since the summer, been the editor of this newsletter. As editor of the Clevatari Newsletter it soon became obvious to me that my job could be made much easier if I could create the newsletter on a ST rather than my trusty 800XL. It was not long after that I came into possession of a 520ST. My first project was to produce the October newsletter using PUBLISHING PARTNER by SoftLogik Corp. At least that's what I wanted to do.

George Neff, Sr., our ST librarian, lent me his copy of PUBLISHING PARTNER to try. The program didn't work the way I had hoped it would and I was in trouble with the newsletter. George came to my rescue, but even he had trouble with PUBLISHING PARTNER. Some how we managed to create the October Newsletter, but not without making several late night phone calls to Gary of B & G Electronics.

Last month, in trying to create the November newsletter, George and I once again ran into trouble with PUBLISHING PARTNER. This time we were stumped. We just could get the "DAMN" thing to print. We once again called Gary of B & G Electronics. Gary told us to come to the store the next night after closing (7:00 PM) and he would see what he could do to help.

The next night I arrived at B & G's at the appointed hour (George was already there). True to his word, Gary locked the door to his store at 7:00 PM and began to look at our "creation". He was soon pointing out the errors we had made in creating the newsletter. Gary stayed with us for several hours working on the newsletter and showing us how the program should be used. Many hours later the newsletter was ready for Gary's printing machine.

That's the end of my story and here's the point I'm trying to make.

When you make a purchase from a mail order house, which is located five hundred or a thousand miles from you, and the program, or piece of hardware, doesn't work the way that it should or the way you had expected it to, what will they do to help you out of your difficulty. Will they spend several hours helping you work out your problem?

I DON'T THINK SO !!

Gary of B & G DID !!!

There are few enough stores in the Cleveland area which deal in our computer and they need your patronage!!! It's undeniably true that a mail order house can and does sell at very low prices. They can afford to. They deal in high volume and don't give any customer support other than to say, "Send it back and we'll send you another." Your local computer store (If it's worth your patronage) will first find out weather the fault is with you or the purchase. They will take the time to help you out of your difficulty.

I don't know how you feel about this but I'll pay the few extra dollars for the peace of mind in knowing that I can call and get this kind of help when I need it.

Gary, ... I thank you for being an Atari dealer.....

You've made me one of your devoted customers.

Joseph Adato

JOHN SUCHY IS LEAVING US !!

It has just come to this persons attention that our current club president, John Suchy, will be leaving Cleveland to re-locate in sunny California at the end of this month. I know that you all join me in wishing John a fond fair well and best wishes in his new job. John will be missed by all of us but we can easily understand his need for "greener pastures". John has been a driving force in the Cleveland Atari scene. His contributions to a better, more enjoyable use of the Atari computer has been outstanding.

I WILL MISS HIM VERY MUCH !!!

John....please stay in touch !!

At our last club meeting (Nov. 1987) so many new benefits were added to our list of club benefits that I felt it would be a good idea to list all of them so that everyone would know what they are entitled to as members of CACE.

MEMBERSHIP BENEFITS

Meetings of the Cleveland Atari Computer Enthusiasts (CACE) are open and free to everyone. We meet the second wednesday of each month at the Natural History Museum from 7:30 PM to 10:00 PM. You do not need to pay an admission charge to the museum to attend meetings. However, there is a yearly charge to become a member of CACE;

Single Membership.....$15.00
Family membership.....$20.00
Business membership....$40.00

The benefits of belonging to CACE are as follows;

(1) A newsletter every month that you attend meetings (For an extra $6.00 per year the newsletter will be mailed to your home.)

(2) The option to purchase disks from our Public Domain library, both for the 8-bit and the ST. These disks are inexpensive. The price covers the cost of production and buying software from other clubs.

(3) A chance to sell and buy commercial software and hardware for the Atari at our Flea Market.

(4) The opportunity to borrow printed materials from the Print Library. This includes back issues of the newsletter, some books and some printed material distributed by Atari Corporation and other companies. You can also borrow newsletters from many other Atari clubs. This includes back issues of Antic, Compute!, and Analog magazines going back to 1980.

(5) The option to purchase at an inexpensive price (to recover the cost of the disk and production) a " Disk of the Month" for both the 8-bit and ST Atari computers. These disks contain Public Domain programs written by our members or members of other clubs from around the country.

(6) An opportunity to borrow certain commercial software owned by the club.

(7) The opportunity to purchase generic 5-1/4" disks at reduced prices.

(8) A chance to talk with other individuals, many who have owned Atari computers for a long time and are willing to answer questions, give advice and otherwise assist you with your Atari problems.

(9) An opportunity to advertise in the club newsletter, free of charge, the sale of used software or hardware.

(10) To gain access to our own message base (sig.) on the TAPS BBS board.

(11) Free Antic monthly disks with proof of magazine purchase. You can either supply your own disk for copy or purchase one from the club at a reduced price.

If you are not now a member and wish to know more about the Cleveland Atari Computer Enthusiasts, please call me at 449-6881. I will be happy to answer any questions you might have.

Joseph Adato
Treasurer/Newsletter Editor

REVISIONS TO THE 8-BIT GRAPHICS DISKS

by

Barbara Carlstrom

Ken Vargo, our 8-bit librarian, has asked me to redo the graphics section of the public domain library disks. The objective of this exercise is to get duplicate pictures off the disks, to remove any programs not dealing with graphics and to catagorize the pictures by type. While this is a lengthy process, I have had a chance to put together the first portion of the library section, which Ken will have available for copying at the meeting. The graphics library, as it now exists, has the following disks:

DISK#1:

This is a disk containing Space and Fantasy pictures, a long with a viewing program that auto loads and displays the pictures. The front of the disk contains pictures from Star Trek scenarios, mostly in black and white, done by a group called Micro-Sis. The back of the disk has a collection of pictures on various space themes. Some are Star Wars drawings, others are from RoboTech comics and others just an artist's rendition of space. All are in color.

CONTINUED ON PAGE #4, LEFT COLUMN

CONTINUED FROM PAGE #3 RIGHT COLUM

Disk #2

The second library disk has two demos on it. The first is a series of graphics, some with animation and sound, done by Anthony Ramos a couple of years ago. My favorite is CANON, a scenario involving graphics and the piano. This is one of the best graphics disks the library has available!

The second demo, on the back of the disk, is from Germany. Don't worry that most of it is in German. Just press numbers 1-4 to start the demo and the rest takes care of itself. The second selection has a series of musical renditions, with a German flair, the third selection has some wonderful graphics. Just experiment.

Disk #3

This third disk contains graphics pictures created by two former members of C.A.C.E. The front was done by Gary Tabar and contains drawings that have appeared on the cover of our newsletters as well as others that parents might consider PG- 13. The back of the disk contains graphics that Phil D'Angelo has put together, including his lovely Shangrila logo.

Please note that all disks mentioned are double sided. Ken is charging $3.00 a disk for members. We should have more disks available by next month.

FOR SALE

1027 Atari printer with two ink rollers. $50. or best offer. Call Emerson Batdorff--247-2616

[ED. This is the start of the column, "INTERESTED IN !! As was mentioned in least months newsletter, (Nov. 1987) anyone CACE member interested in placing a "for sale" notice for new or used software/hardware, has a question that is in need of an answer, or would like to know where to find something should contact our newsletter editor to place such a notice in the next issue of this newsletter. You can find his phone number (and the phone numbers of all CACE officers) by looking at the back page of this newsletter. This is just one of the many benefits one gets by belonging to CACE.]

THANK YOU ALL !!

As the year of 1987 comes to a close, and this will be my last opportunity to 'talk' to you this year, I would like to take the time to give a SPECIAL THANKS to several individuals who have come to my aid since I became editor of this newsletter.

To Barbara and Ian Carlstrom for their unfailing support, confidence, and showing me how a newsletter should look by their example as newsletter editor

To John Suchy who [illegible]y lent me his printer when my Gemini 10X broke down, but who spent and entire day working on the creation of the August newsletter with me.

To George Neff, Sr. who introduced me to the wonders of an 'ST' and who has stayed with me, more times than my wife would like, till the wee hours of the morning helping me to learn how to use Publishing Partner.

To Gary Schmitz For just being there when I needed him.

To my wife who has counted to ten at least a thousand times because of my new found love and romance with this computer and the time if keeps me away from her and the kids.

I would also like to wish:

To all of my Jewish friends

A HAPPY CHANUKA!!!

To all of my non-Jewish friends

A VERY MERRY CHRISTMAS!!

And to everyone

A VERY HEALTHY AND PROSPEROUS NEW YEAR!!

Joseph Adato

A COLOR REGISTER UTILITY

by I.F. Carlstrom

Like many of the utilities that I have written, this program grew out of a specific need. Joe Adato found that the result of porting our traditional Clevatari logo to the ST Publishing Partner left the "Cleve" buildings intact, but the "Atari" symbol and name had disappeared. This symbol and name were printed in different colors than was the buildings. It would clearly be useful to be able to convert the drawing to just two color registers.

Many of our printer screen-dumps for the 8-bit Ataris take pictures in the Micropainter format and print out the four color registers in different shades of grey. The COLOR 0 register is white, COLOR 3 is black, while COLOR 1 and 2 are equal, but complementary, shades of grey. If the original artist had chosen a dark color for COLOR 0 and a light color for COLOR 3, the resulting screen-dumps might be quite unsatisfactory. Here again it would be useful to have a utility that could permute the color registers of the drawing.

This program is written in Turbo Basic and it will not run on the older Ataris. It was designed in part to illustrate some of the powerful new commands of Turbo Basic. It was deliberately written in a very simple and straightforward way. No fancy display lists or machine language were used.

The program uses a simple help menu that can be viewed at any time by pressing 'H'. Picture files are loaded and saved in the Micropainter format, which requires 62 sectors for a picture. Two buffers are used to store pictures. When loaded, pictures are stored in a "load-buffer," which remains intact until a new picture is loaded. When ever 'K' is pressed the current screen is stored in a "save-buffer," which can then be saved to disk. Take care to press 'K' only when you are ready to save the current screen! Press 'O' to view the original load-buffer and 'R' to view the revised picture in the save-buffer.

The program performs two tasks. It allows you to redefine the color registers and to merge two pictures. Press '0' to '3' to view that portion of the screen colored with the corresponding register. Press 'C' to redefine the registers. A funny sound lets you know that the computer is busy thinking. The screen is then redrawn with the new registers. When the process is complete, an attempt is made to restore the original colors. But, even if the picture appears much the same, new color registers are being used. Press 'K' and 'S' to save the results.

To merge two pictures you should keep the first picture in the save-buffer and load the second. Press 'M' to merge the two together. Three merging options are allowed. Under the 'AND' option COLOR 0 will dominate; under 'OR' COLOR 3 will dominate; and under 'EXCLUSIVE-OR' COLOR 3 in one picture will cause the other picture to be complemented. If you like the result, press 'K' to keep the merged picture. But remember that this will erase the previous picture in the save-buffer.

The program is initialized at line 15000 and the main loop begins at line 10000. These line numbers are used to allow room for subroutines requiring speed to be placed at the beginning of the listing. Anytime that you BREAK the program, you can type GOTO 10000 to get back to the main loop. Then press 'H' to restore the menu. Turbo Basic has an 'ENDIF' command that allows conditionals to extend over several lines. This made it very easy to write a main loop which responds to each allowed key press. Notice also how the BGET, BPUT and DIR commands greatly simplify the task of accessing disk files.

The load-buffer is saved in the string A$. You can create purely random "snow" by breaking the program and typing:

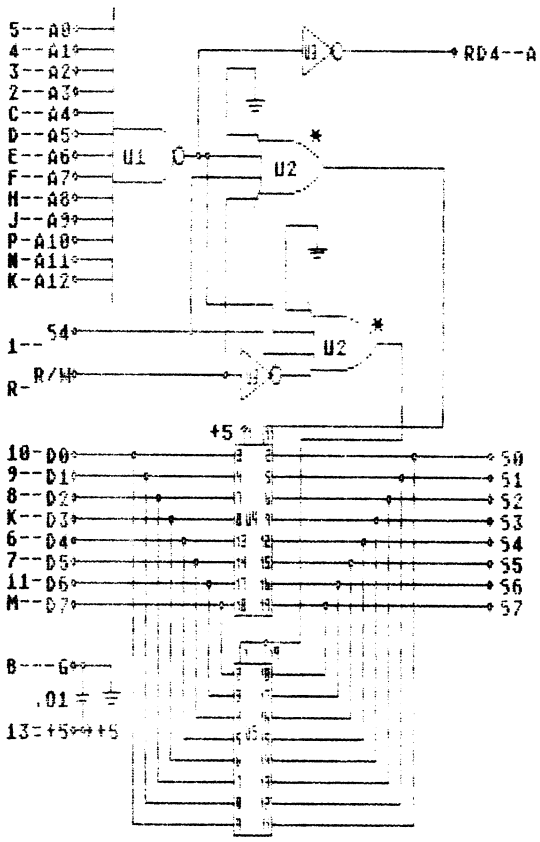
```
FOR I=1 TO 192*40:B=INT(255*RND(0)):A$(I,I)=
CHR$(B):NEXT I
```

Move the snow to the save-buffer and save it to disk. Now load your favorite picture and merge it with the snow under the EXCLUSIVE-OR merge. The screen will end up as a new random snow pattern. Keep it and save it to disk. Each snow file is purely random. There is no information that could be extracted from it. However, when the two snows are merged under EXCLUSIVE-OR, your original picture reappears. I have no idea what you could do with this magic. I suspect that children would find the process to be fascinating. There might be a practical use as well. If you happen to be operating an international spy ring, you could give each file to a different spy so they could recognize each other.

Listing On Page 6

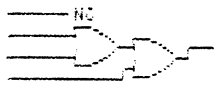
```
100 REM ************************
110 REM *  COLOR REGISTER UTILITY *
120 REM *(c) 1987 I.F. Carlstrom    *
130 REM ************************
200 GOSUB 15010:GOTO 10010
790 REM **MERGE**
800 RETURN
810 SCR=DPEEK(88)-1:FOR I=1 TO 7680:POKE SCR+I,(ASC(A$(I))&ASC(B$(I))):NEXT I:RETURN
820 SCR=DPEEK(88)-1:FOR I=1 TO 7680:POKE SCR+I,(ASC(A$(I))ASC(B$(I))):NEXT I:RETURN
830 SCR=DPEEK(88)-1:FOR I=1 TO 7680:POKE SCR+I,(ASC(A$(I)) EXOR ASC(B$(I))):NEXT I:RETURN
900 REM **RESET SCREEN**
910 SCR=DPEEK(88):FOR I=SCR TO SCR+7679:A=PEEK(I):POKE I,C(A):NEXT I:RETURN
1000 REM **SET REGISTER MATRIX**
1010 FOR I=0 TO 255:SOUND 2,I,10,10
1020 V1=I&3:V2=I&12:V3=I&48:V4=I&192
1030 NV=C01*(V1=0)+C11*(V1=1)+C21*(V1=2)+C31*(V1=3)
1040 NV=NV+C02*(V2=0)+C12*(V2=4)+C22*(V2=8)+C32*(V2=12)
1050 NV=NV+C03*(V3=0)+C13*(V3=16)+C23*(V3=32)+C33*(V3=48)
1060 NV=NV+C04*(V4=0)+C14*(V4=64)+C24*(V4=128)+C34*(V4=192)
1070 C(I)=NV:NEXT I
1080 SOUND 2,0,0,0:RETURN
10000 REM **MAIN LOOP**
10010 TRAP 33333:A=FRE(0):POP :IF A<FRE(0) THEN GOTO 10010
10020 GET K
10030 IF K=ESC:REM **DISK DIRECTORY**
10040 ?:GOSUB 17300:? "PRESS NUMBER OF DISK DRIVE":?
10050 GET N
10060 IF N=49 OR N=50 OR N=56
10070 DR$(2,2)=CHR$(N):DIR DR$
10080 ? :? :? "PRESS A KEY":GET N
10090 ENDIF
10100 GOSUB 17000
10110 ENDIF
10150 IF K=ASC("K") THEN MOVE DPEEK(88),ADR(B),7680:BB12=CC12:BB8=CC8:BB9=CC9:BB10=CC10
10200 IF K=ASC("L")
10210 ? :GOSUB 17300:TRAP 20000:GOSUB 19000:CLOSE #2:OPEN #2,4,0,FN$
10220 BGET #2,ADR(A),192*40:GET #2,CC12:GET #2,CC8:GET #2,CC9:GET #2,CC10
10230   CLOSE #2:GOSUB 21010
10240 ENDIF
10300 IF K=ASC("O") THEN GOSUB 21000:GOTO 10010
10320 IF K=ASC("R") THEN GOSUB 22000:GOTO 10010
10400 IF K>47 AND K<52
10410 CR1=PEEK(708):CR2=PEEK(709):CR3=PEEK(710): CR0=PEEK(712)
10420 FOR I=0 TO 3:CR(I)=12:NEXT I:CR(K-48)=0:POKE 708,CR(1):POKE 709,CR(2):POKE 710,CR(3):POKE 712,CR(0)
10430 GET N:POKE 708,CR1:POKE 709,CR2:POKE 710,CR3:POKE 712,CR0:GOTO 10010
10440 ENDIF
10500 IF K=ASC("C")
10510 B$=A$:BB12=CC12:BB8=CC8:BB9=CC9: BB10=CC10: CR(0)=BB12:CR(1)=BB8:CR(2)=BB9:CR(3)=BB10
10520 ? :GOSUB 17300:? "ENTER NEW COLOR REGISTERS":POKE 752,0
10530? " FOR COLOR REGISTER 0:";:GOSUB 23000:C01=N:C02=4*N:C03=16*N:C04=64*N:NC(N)=0
10540 ? " FOR COLOR REGISTER 1:";:GOSUB 23000:C11= N:C12=4*N:C13=16*N:C14=64*N:NC(N)=1
10550 ? " FOR COLOR REGISTER 2:";:GOSUB 23000:C21=N:C22=4*  N:C23=16*N:C24=64*N:NC(N)=2
10560 ? " FOR COLOR REGISTER 3:";:GOSUB 23000:C31=N:C32=4*N:C33=16*N:C34=64*N:NC(N)=3
10565 GOSUB 22010:IF (C01=0 AND C11=1 AND C21=2 AND C31=3) THEN GOTO 10010
10570 GOSUB 1010:GOSUB 910
10580MOVE SCR,ADR(B),7680:BB12=CR(NC(0)): BB8=CR(NC(1)):BB9=CR(NC(2)):BB10=CR(NC(3)):GOSUB 22010
10590 ENDIF
10600 IF K=ASC("S")
10610 ? :GOSUB 17300:TRAP 20000:GOSUB 19000:CLOSE #2:OPEN #2,8,0,FN$
10620 BPUT #2,ADR(B),192*40:PUT #2,BB12:PUT #2,BB8:PUT #2,BB9:PUT #2,BB10
10630 CLOSE #2:GOSUB 22010
10640 ENDIF
10700 IF K=ASC("H") THEN GOSUB 17000
10800 IF K=ASC("M")
10810   ? :GOSUB 17300:? :? "SELECT MERGE TYPE:":? " 1 - AND":? " 2 - OR":? " 3 - EXOR"
10820   GOSUB 23000:GOSUB 21010:GOSUB 800+10*N
10830 ENDIF
10900 GOTO 10010
15000 REM **INIT**
15010 DIM A$(7700),B$(7700),FN$(20),FN1$(20),DR$(6)
15020 DR$="D1:*.*":A$(7700)="":B$=A$
15030 DIM C(255),CR(3),NC(3)
15040 ESC=27
15090 GOSUB 17000:RETURN
16000 RETURN
17000 GRAPHICS 0:GOSUB 17300
17010 ? "        COLOR REGISTER UTILITY"
17015 ? "      (c) 1987 by I.F. Carlstrom"
17020 ? :? "                MENU":?
17030 ? "ESC - DISK DIRECTORY"
17040 ? " L   - LOAD ORIGINAL PICTURE"
17050 ? " S   - SAVE REVISED PICTURE"
17060 ? " O   - VIEW ORIGINAL PICTURE"
17070 ? " R   - VIEW REVISED PICTURE"
17080 ? " K   - KEEP SCREEN AS REVISED PICTURE"
17090 ? "0-3  - EXAMINE COLOR REGISTER"
17100 ? " C   - CONVERT COLOR REGISTERS"
17110 ? " M   - MERGE TO SCREEN"
17120 ? " H   - RETURN TO THIS HELP MENU"
17200 RETURN
17300 POKE 710,12:POKE 709,0:POKE 712,198:POKE 752,1:? :RETURN :REM **COLORS-MENU SCREEN**
19000 REM **FILE NAME**
19010 POKE 752,0:? :? :? "ENTER DISK FILE NAME WITH EXTENSION"
19020 FN$="D1:":INPUT #16;FN1$:F=LEN(FN1$)
19030 IF F=0 THEN GOSUB 17000:GOTO 10010
19040 IF F>2 THEN IF FN1$(3,3)=":" THEN FN$=FN1$:RETURN
19050 IF F>1 THEN IF FN1$(2,2)=":" THEN FN$=FN1$:RETURN
19060 FN$(4)=FN1$:RETURN
20000 ? :? "DISK ACCESS ERROR: ";PEEK(195):? "PRESS A KEY":GET N:GOSUB 17000:GOTO 10010
21000 REM **SHOW A$**
21010 GRAPHICS 15+16:POKE 712,CC12:POKE 708,CC8:POKE 709,CC9:POKE 710,CC10
21020 MOVE ADR(A$),DPEEK(88),192*40
21030 RETURN
22000 REM **SHOW B$**
22010 GRAPHICS 15+16:POKE 712,BB12:POKE 708,BB8:POKE 709,BB9:POKE 710,BB10
22020 MOVE ADR(B$),DPEEK(88),192*40 22030 RETURN
23000 GET N:REM **GET A NUMBER**
23010 IF N=155 THEN GOSUB 17000:GOTO 10010
23020 IF N<48 OR N>51 THEN GOTO 23000
23030 N=N-48:PRINT N:RETURN
```

COLUMN TWO



DES.	I. C.	+PIN	-PIN
U1	74LS133	16	8
U2	74LS32	14	7
U3	74LS04	14	7
U4	74LS273	20	10
U5	74LS541	20	10

* NOTE: SINCE THE 4-INPUT OR-GATE IS NOT AVAILABLE IN MANY PLACES, USE THE 74LS32 AND THIS CIRCUIT:



COLUMN ONE

CONTROL THE WORLD!
(WITH YOUR ATARI!)

For those of you who have been asking me for a long time how to turn real world devices on and off with your computer, HERE IT IS! This circuit uses the cartridge slot as described on page 234 of the XL/XE version of Compute's "Old faithful", Mapping the Atari. (If you don't own a copy, get one anyway--it has a wealth of information that is hard to find almost anywhere else.)

I chose my port for ease of use and flexibility. I wanted to free up the joystick port for the use of keypads or even joystick control of the external devices. Or better still, for game use if some top-notch programmer out there can come up with a back-ground control system that would allow such control while the computer is being used for other things.

I stayed away from the SIO port because I did NOT want to have to worry about such things as SIO programming, "device handlers", and -- worst of all -- building the SIO decoder circuit.

By using the cartridge slot, I was able to "steal" one byte of memory for use as a hard I/O register. Since the XL/XE computers will accept a Right-Slot cartridge, I chose byte #40959 (HEX 9FFF) so that basic could still be used and so that the least amount of memory would be wasted when the new control port was in use. In fact, this port will behave like normal memory--just expect your access-ories to follow the whims of the bottom corner of your screen.

CIRCUIT DESCRIPTION

Since the cartridge port has only 13 address lines present, you have to use the internal cartridge select lines. That means you have to tell the computer that there is a cartridge present--which either turns off BASIC of uses 8K of available memory. The solution is to tell the computer about the cartridge ONLY for the addresses you want. As shown, the address is 40959. U1 detects the address and turns on cartridge detect (RD4) only when the low order 13 bits match our address. Then the computer checks the upper 3 bits and turns on S4 if they match. The output of U1 is also fed to U2 along with S4 and the read-write (R/W) signal to tell U4 and U5 what to do.

When you write to 40959, the upper half of U2 sends a pulse to U4 (an 8-bit binary latch) to tell it to store the bits from the data lines (D0 thru D7) in the latches. On a read, the bottom half of U2 pulses U4 (an 8-bit bus driver) to send the data last latched in U4 back to the computer.

This system is more flexible than it might look at first. U5, instead of being tied to U4, could hook up to sensors in the real world. Or a second input byte could be added to compare the commands from U4 with their actual results. Or just generally add more inputs and outputs.

To add a second byte, tie the A0 input of U1 to +5 volts, then use the A0 line to select between two sets of U2, U4, and U5. If you don't understand now, ask: there are several members of the club who can help with what changes you need.

Note that I have given pin numbers for only the more complex IC's. Again, if you need more specific information, ask.

GOOD LUCK AND THANKS --- JOHN E. SUCHY

PROGRAMMING CONSIDERATIONS

First, since we are not telling the CPU about the cartridge on power-up, it will try to put screen memory so it will end at our I/O byte. Since we don't want any changes in the screen to affect the things we are trying to control, we have to protect that byte.

The simplest method is to subtract 1 from the value found in byte 106, then execute a graphics command:

```
1 POKE 106,PEEK(106)-1
2 GRAPHICS 0
```

This reserves a 256 byte buffer above screen memory for our I/O. (Before you scream about losing 1/4K, notice that that number of bytes COULD beused to control 256*8 (2048) external devices--and very few programs use that last 1/4K, anyway.)

Now that it is protected, how do you use the I/O byte? JUst poke it. It's binary. To turn on S0, POKE 40959,1. To turn on S1, poke -,2. To turn on both, poke -,3. And so on. In general if Sn is off, you turn it on by adding 2^n to the value in (40959). To turn it off when it's on, subtract the same value. But don't forget and turn one on this way when it is already on, or off when it's off, that will mess up more than just the one switch.

It is safer to learn a little about binary functions and how to use them. Just briefly, the AND function can turn off only the selected switches whether previously on or off; the OR function will make sure the bit(s) you want are on, and the X-OR (read exclusive-OR) will make your bit(s) turn on oan off like a push-button switch.

If enough of you are interested, maybe one of the "expert programmers" can be talked into writing a subroutine or utility for this port.

[ED. Reprinted from Tri-County Atari Users' Club newsletter Oct. 1987]

ELECTRONIC COMPUTER PROJECTS

Review by Carl C. Hahn

Some new houses are controlled by a computer. A group of engineering students built a robot. Have you wanted to try something like that, but were in awe of electronics? Then I have news for you. This new book from Compute! won't tell you how to control your house, or build a robot, but it will give you a chance to see your computer in a new way. If you have an Atari 400/800/XL/XE, you should find something of interest. The book contains enough information to give an amateur the confidence to try something that sounds difficult, and provide some good information about your computer as well .

The preface tells you what tools you'll need to get started. The list isn't long and your supplied won't cost much. You probably even already have some of the items. It also explains how to solder so you get a good connection, but most of the projects don't require a lot of soldering.

There are 182 pages including a good index. The book is even wire-bound so it will lay flat while you work. There are a lot of illustrations and diagrams. The reading is easy to understand, and tells you just what you need to know.

Once you add a component to your computer, you need a program (application) to make it work. DOS is a good example of an application. Without DOS your disk drive is just an expensive paper-weight. This book includes the application that you type in for each of the projects. Compute! also knows people have trouble typing programs from a listing, so they have included a program called "Proofreader" to check your program typing.

WHEN YOU TYPE "PROOFREADER" THE FIRST TIME BE SURE YOU SAVE IT!!!!!

If you RUN it merrily installs a machine language routine and vanishes.

Each project is provided with a list of parts (complete with the appropriate Radio Shack part number) you will need. This way, not only do you know that you have the right parts but can pick them up in one trip to the store. You can also check the catalog in advance so you know how much money you'll need.

Although it starts with a brief explanation about how your computer works (bit, and bytes, and switches), by page 9 you are ready to start your first project: A simple Logic Probe. While you follow the instructions, you learn about resistors. Then you build a connector for your joystick port, type in an 11-line program and use the logic probe to check which pins have current. Since you are working with current from the computer, there is no danger of electrical shock.

The second project is making a simple joystick in a plastic box (Radio Shack), with five switches for up, down, left, right, and fire. This one requires more soldering, but gives you a lot of experience. You can also build a gravity joystick with mercury switches, if you want. Next you make some paddle controllers, and test them on you computer.

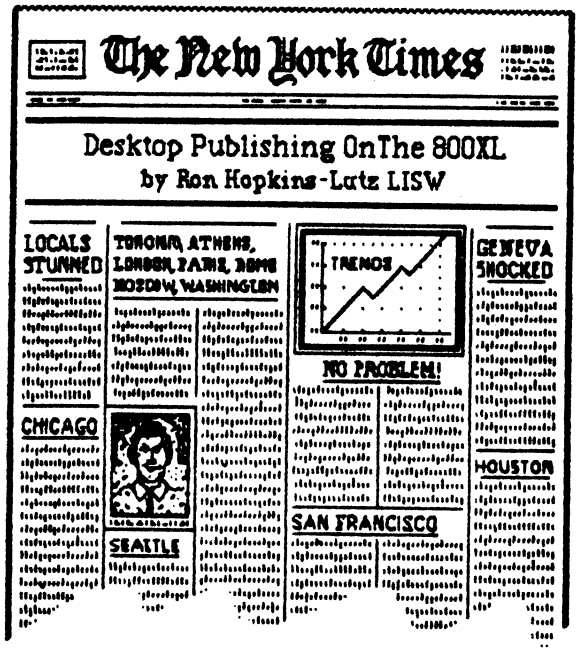
Each of the projects and subsequent applications get more and more complex, but each builds confidence. You also get experience in using a soldering breadboard for your circuits. You can begin wire wrapping the connections, which makes it possible to take your projects apart and reuse the breadboard.

Since we are only up to page 45, I'll fast forward through some of the next projects. There's an Analog Light Sensor using a photocell, and Light Pen using a phototransistor and a NAND gate IC. How about making a Variable Digital Light Sensor (to tell when someone opens the refrigerator door), or a digital Light Beam Timer (to time slot cars as they circle the track). You learn how your computer can send signals to the outside while you build an Electronic Switch. Using the information from the joystick digital light sensor, and electronic switch projects, you can even build a Burglar Alarm.

You learn about Digital Logic and how to make a Better Logic Probe. There's a chapter that shows how you can build on the earlier projects, with diagrams and pictures. The last chapter even tells about Robotics. It does show how you can control one motor (such as raising and lowering an arm) with a computer program.

This would be a good book for a Father-Son team. Most of the projects can be completed in a couple of nights, including typing in the programs.

Electronic Computer Projects for Commodore and Atari Personal Computers,
by Soori Sivakumaran,
Publisher..Compute! Books
P.O. Box 5038 F.D.R. Station
New York, NY 10150
$9.95


The New York Times

Desktop Publishing OnThe 800XL

by Ron Hopkins-Lutz LISW

LOCALS STUNNED

TORONTO, ATHENS, LONDON, PARIS, ROME MOSCOW, WASHINGTON

TRENDS

GENEVA SHOCKED

NO PROBLEM!

CHICAGO

HOUSTON

SAN FRANCISCO

SEATTLE

FORM GENERATION

Creating forms with the 800XL with a word processor is easy but often the end product is not as attractive as it might be. There are several things you can do to create forms that are both useful and present your group or business in a good light.

Logos

Custom logos are easy to use and design. They not only identify your organization but make the form official.

The Sketchpad mode of TYPESETTER or icon designer in THE PRINT SHOP can give you the drawing tools you need to create an attractive logo.

Because you will be using dot matrix printers try for simple clean designs with few small details. The smaller the detail the harder it is for the printer to produce it clearly.

One of the most attractive things to base logos on are stylized letters. Look at the NBC tv logo tonight and to see what I mean.

Icons designed with THE PRINT SHOP can be incorporated by using letterhead mode to put them at the top or bottom of the paper you print on, even if you do not use THE PRINT SHOP to produce the final form.

Line Spacing

When creating forms to be filled out by hand always allow extra width and height so that people do not have to squeeze everything into a tiny space.

If creating for a typewriter or printer, remember that most machines print or type at of six lines per inch (12/72nds) line spacing. When using a program like TYPESETTER you may have to do quite a bit of trial and error using vertical fine scrolling to get the spacing right.

Always put some kind of alignment mark in the upper left and right corners as a reference both during design and for lining up the form later.

Checkoff Forms

When doing checkoff forms do not use a blank line for check marks. They are very difficult for the eye to find on a full page. Instead use a *ballot box*. These are the small boxes found on voting ballots. You can use a capital O. If you are using TYPESETTER use the Sketch Pad to create a box and then overlay it into position where needed in the fininshed form.

Good-Bye

As this is my last column on desktop publishing, for more information on desktop publishing there are several books on the market. I recommned The Complete PrintMaster for some good guidelines on layout for beginners. Look for books on the technical end of desktop publishing and layout rather than particular programs or machines.

PUBLISH! and PERSONAL PUBLISHING magazines, and the regular desktop publishing section in COMPUTER GRAPHIC magazine are invaluable resources.

ANALOG and FAMILY COMPUTING have recently been giving some space to desktop publishing and you can expect to see more in the future.

Ron Hopkins-Lutz LISW

ST DISK OF MONTH

George Neff, Sr., our disk librarian, has created a disk full of games for this holiday season. As usual the programs have been archived. This means that when you un-arch this disk you will have two disks full of games for you and the kids to have fun with. Some of the many games on this disk are:

joust..... This is the 16-bit version of the 8-bit favorite

Celestial Ceasars... This is an arcade type game which requires a lot of strategy to stay alive, let alone wine the game.

Larn... This is an adventure game which is based on Dungeons and Dragons. If you like a game that takes you thorugh a variety of mazes you'll like this game.

dalek...Here's another space adventure. You are all alone and surrounded by hundreds of enemy space ships----My kids love this one.

Nightcrawlers....I haven't figured this one out yet, but it does make lots of nice multi-colored designs on the screen.

Timebandit....This is a series of mazes similar to PAC-MAN and GAUNTLET. This one is another game my kids enjoy very much.

These are but a few of the games on this disk. As mentioned before, all of the games have been archived, that is why you'll also find included on this disk.... ARC.TTP with documentation.

cost to members.....$4.00
cost to non-members....$8.00

SPINNAKER TO DISCONTINUE PRODUCTION OF ATARI SOFTWARE

by Joseph Adato

It appears that yet another software company feels that the Atari market is not worth their efforts. P.A.C.E. (Pittsburgh Atari Computer Enthusiasts) has reported in its September newsletter that SPINNAKER will stop production and distribution of all 8-bit and 16-bit (ST) software.

In case you'r not aware, SPINNAKER is the maker of educational 8-bit programs such as; SNOOPER TROOPS, RHYMES and RIDDLES, and IN SEARCH OF THE MOST AMAZING THING. IN the ST department SPINNAKER produces HOMEWORK HELPER and a graphic adventure series based on such classic school texts as TREASURE ISLAND. In the adult area SPINNAKER makes the Tellarium series which includes FAHRENHEIT 451.

When a spinnaker public relations person was questioned the reply given was that SPINNAKER now prefers to place its full emphasis on their best selling machines, such as, Apple, IBM, and Commodore. Obviously SPINNAKER feels that the Atari buyer is not "out their".

It's time for all of us to get out our word processors and write SPINNAKER a letter letting them know that we're "out here" and we care!!!

Please send your letter to;

SPINNAKER
1 Kendall Square
Cambridge 02139, Mass.

8-bit and ST treasures disk

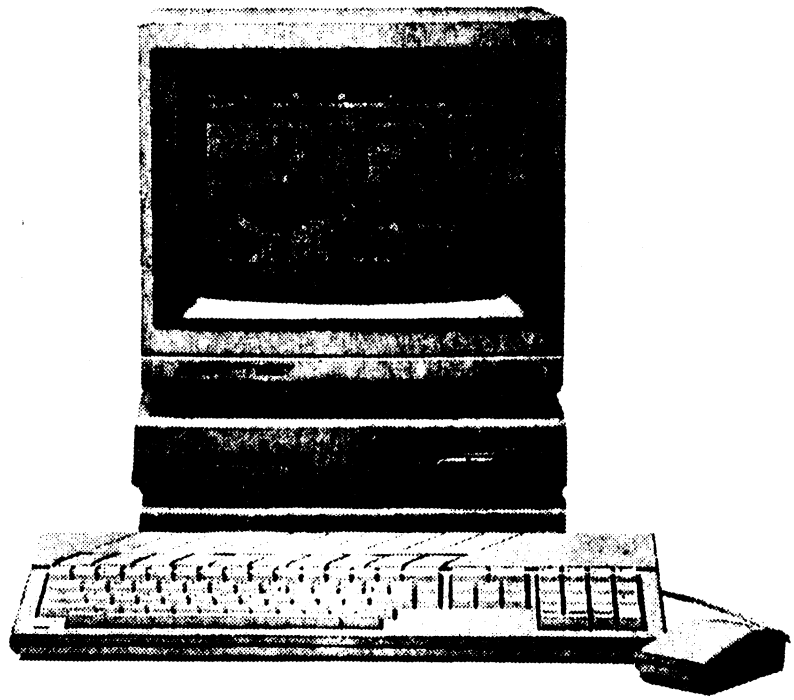
Barabra and Ian Carlstrom have once again created a MUST HAVE!! disk for this month. This disk came about because of my request to Ian to find a way to transport the club logo from my 8-bit machine to my 16-bit and be able to use it with PUBLISHING PARTNER. The explaination on how Ian acomplished this with the actual program can be seen on pages 5 and 6 of this issue. For those of you who are to lazy, (like me), to type this program into memory, the Carlstoms are offering it for the small sum of 3.00, but remember, you have to be a member of CACE to be able to buy this disk.. Together with COLOR REGISTER UTILITY, (Ian's program), is a public domain called MAGIC LANTERN which will take pictures created with a touch tablet or koala pad and let the viewer to see all of the pictures on the disk or just select one or two of those pictures for viewing.

The ST treasure disk has special xmas pictures plus a delightful program which turns you ST keyboard into a piano keyboard and lets you play single notes or chords. Included on this disk will be pictures made specially for this xmas season. This cost for this disk is $2.50 and is only offered to CACE members.

This months disk of the month is a MUSICAL DEMO DISK created by Anthony Ramos using his creation, PARROT. This disk is offered to CACE members only for 3.00.

To George and Gary.....LOOK GUYS.....NO HANDS !!!

AT ALMOST HALF THE PRICE, IT LOOKS EVEN BETTER.



You're looking at the newest business computer. The MEGA™ computer from Atari. And at almost half the price of a Macintosh™ SE, it looks even better.

With 2 or 4 megabytes of memory and 68000-based technology, the MEGA computer has the power to perform any business task.

The MEGA has a graphics accelerator chip for faster, smoother scrolling and a high-speed DMA port for faster file access. It also has color. 512 colors to be exact.

And it's supported by a full range of business software. Software that can balance the books, manage the database, and even animate the next sales presentation. What's more, with the Atari SLM804™ laser printer, you can even publish a newspaper.

All for about half the price of the Mac SE.

Simply put, the Atari MEGA is a faster, more feature-rich computer. At about half the price. Now, isn't that better?

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The CLEVELAND ATARI COMPUTER ENTHUSIASTS is an independent user group and is not affiliated in anyway with ATARI CORP. and its affiliates.
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To become a member: see the treasurer before the meeting or during the intermission.

To submit to the newsletter: We accept any type of readable text, but program listings must be submitted on tape or disk from a working copy. We prefer that the text be submitted both in print and on tape or disk. Text from any common word processor is acceptable. We can provide you with public domain word processors.

Program listings, both long and short, are particularly welcome. However, we are also interested in reviews, tutorials, and articles of general computing interest. The editors will make final decisions as to the suitability of articles, but we will usually print anything submitted.

Articles published in this newsletter may be reprinted provided that authors and this newsletter are given credit. Although every effort has been may to check the authenticity and accuracy of the information presented, this newsletter and its editors assume no responsibility for any mishap due to the acting on suggestions presented in this newsletter.

In addition to articles and programs, we also seek computer art and letters to the editor.

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CLEVATARI NEWSLETTER
2769 DERBYSHIRE ROAD
CLEVELAND HEIGHTS, OHIO 44106

TO: